WEST Search History

Hide Items | Restore | Clear | Cancel

DATE: Tuesday, December 23, 2003

Hide?	Set Name	Query	Hit Count
		DB=PGPB,USPT; PLUR=YES; OP=ADJ	
☐	L4	((enzym?|esterase|proteinase|protease|amidase) near3 deblock$) and amine	13
☐	L3	((enzym?|esterase|proteinase|protease|amidase) near3 deblock$) same amine	0
		DB=USPT; PLUR=YES; OP=ADJ	
☐	L2	((enzym?|esterase|proteinase|protease|amidase) near3 deblock$) same amine	0
		DB=PGPB,USPT; PLUR=YES; OP=OR	
☐	L1	((enzym?|esterase|proteinase|protease|amidase) near3 (deprotect$\|remov$))	7425

END OF SEARCH HISTORY

http://westbrs:9000/bin/cgi-bin/srchhist.pl?state=mpak7e.87.1&f=toc1&userid=jweber

WEST Search History

Hide Items | Restore | Clear | Cancel

DATE: Tuesday, December 23, 2003

Hide?	Set Name	Query	Hit Count
	DB=EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ		
☐	L7	L6 and amine	20
☐	L6	20010104	1361
☐	L5	20010104	8582
	DB=PGPB,USPT; PLUR=YES; OP=ADJ		
☐	L4	20010104	70
☐	L3	L2 same amine	88
☐	L2	(enzym?|esterase|proteinase|protease|amidase) near3 (deprotect$\|remov$)	7425
	DB=USPT; PLUR=YES; OP=ADJ		
☐	L1	(enzym?|esterase|proteinase|protease|amidase) with (deprotect$\|remov$)	12529

END OF SEARCH HISTORY

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* * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 13:41:38 ON 23 DEC 2003

=> file ca
COST IN U.S. DOLLARS                                    SINCE FILE     TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

FILE 'CA' ENTERED AT 13:41:45 ON 23 DEC 2003

=> e 83:114896y/an
E1            1     83:114895/AN
E2            1     83:114896/AN
E3            0 --> 83:114896Y/AN
E4            1     83:114897/AN
E5            1     83:114898/AN
E6            1     83:114899/AN
E7            1     83:1149/AN
E8            1     83:11490/AN
E9            1     83:114900/AN
E10           1     83:114901/AN
E11           1     83:114902/AN
E12           1     83:114903/AN

=> s e2
L1            1 "83:114896"/AN

=> d

L1   ANSWER 1 OF 1  CA  COPYRIGHT 2003 ACS on STN
AN   83:114896  CA
TI   Enzymes as reagents in peptide synthesis.  Enzymic removal of amine
     protecting groups
AU   Meyers, Chester; Glass, John D.
CS   Mt. Sinai Med. Sch., City Univ. New York, New York, NY, USA
SO   Proceedings of the National Academy of Sciences of the United States of
     America (1975), 72(6), 2193-6
     CODEN: PNASA6; ISSN: 0027-8424
DT   Journal
LA   English


=> e 84:44649/an
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E6            1     84:44651/AN
E7            1     84:44652/AN
E8            1     84:44653/AN
E9            1     84:44654/AN
E10           1     84:44655/AN
E11           1     84:44656/AN
E12           1     84:44657/AN

=> s e3
L2            1 "84:44649"/AN

=> d

L2   ANSWER 1 OF 1  CA  COPYRIGHT 2003 ACS on STN
AN   84:44649  CA
TI   Novel use of enzymes as reagents in peptide synthesis.  Enzymic removal of
```

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     amine protecting groups
AU   Meyers, Chester A.
CS   City Univ. New York, New York, NY, USA
SO   (1975) 119 pp.  Avail.: Xerox Univ. Microfilms, Ann Arbor, Mich., Order
     No. 75-21,524
     From: Diss. Abstr. Int. B 1975, 36(4), 1690
DT   Dissertation
LA   English


=> file caplus scisearch
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       6.40       6.61

FILE 'CAPLUS' ENTERED AT 13:43:24 ON 23 DEC 2003
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FILE 'SCISEARCH' ENTERED AT 13:43:24 ON 23 DEC 2003
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=> e meyers c, 1975/re
E1            2     MEYERS C, 1974, V7, P62, P AM SOC NEPHOLOGIC/RE
E2            4     MEYERS C, 1974, V7, P62, P AM SOC NEPHROL/RE
E3            0 --> MEYERS C, 1975/RE
E4            1     MEYERS C, 1975, 4TH P AM PEPT S/RE
E5            1     MEYERS C, 1975, P2193, P NATL ACAD SCI USA/RE
E6            1     MEYERS C, 1975, P325, 4TH P AM PEPT S/RE
E7            1     MEYERS C, 1975, P325, 4TH PEPT 1975 P AM P/RE
E8            3     MEYERS C, 1975, P325, PEPTIDES CHEM STRUCT/RE
E9            1     MEYERS C, 1975, P325, PEPTIDES CHEMISTRY S/RE
E10           1     MEYERS C, 1975, P325, PEPTIDES CHEMISTRY STRUCTURE AND BIOLO
                    GY/RE
E11           1     MEYERS C, 1975, PEPTIDES CHEM STRUCT/RE
E12           1     MEYERS C, 1975, PEPTIDES CHEMISTRY STRUCTURE AND BIOLOGY/RE

=> s e5
L3            1 "MEYERS C, 1975, P2193, P NATL ACAD SCI USA"/RE

=> d

L3   ANSWER 1 OF 1  SCISEARCH  COPYRIGHT 2003 THOMSON ISI on STN
AN   93:172425  SCISEARCH
GA   The Genuine Article (R) Number: KR401
TI   ENZYMATIC PROTECTING GROUP TECHNIQUES IN BIOORGANIC SYNTHESIS
AU   REIDEL A; WALDMANN H (Reprint)
CS   UNIV BONN, GERHARD DOMAGK STR 1, W-5300 BONN, GERMANY
CYA  GERMANY
SO   JOURNAL FUR PRAKTISCHE CHEMIE-CHEMIKER-ZEITUNG, (1993) Vol. 335, No. 2,
     pp. 109-127.
     ISSN: 0941-1216.
DT   General Review; Journal
FS   PHYS; ENGI
LA   ENGLISH
REC  Reference Count: 99
     *ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*


=> index bioscience
FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                      12.34      18.95
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INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS,
      BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT,
      CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DISSABS, DDFB, DDFU,
      DGENE, DRUGB, DRUGMONOG2, ...' ENTERED AT 13:46:22 ON 23 DEC 2003

68 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view
search error messages that display as 0* with SET DETAIL OFF.

=> s (enzym? or esterase or proteinase or protease or amidase)(3a)(deblock? or
deprotect? or remov?) and amine
          1   FILE BIOBUSINESS
         26   FILE BIOSIS
         30   FILE BIOTECHABS
         30   FILE BIOTECHDS
         14   FILE BIOTECHNO
          5   FILE CANCERLIT
  14 FILES SEARCHED...
        108   FILE CAPLUS
          7   FILE CEABA-VTB
          3   FILE CEN
          1   FILE CIN
          2   FILE CROPU
          4   FILE DISSABS
          2   FILE DDFB
          6   FILE DGENE
          2   FILE DRUGB
          4   FILE DRUGU
  29 FILES SEARCHED...
         27   FILE EMBASE
          6   FILE ESBIOBASE
          3   FILE FROSTI
          2   FILE FSTA
         45   FILE IFIPAT
         26   FILE JICST-EPLUS
          5   FILE LIFESCI
  45 FILES SEARCHED...
         21   FILE MEDLINE
          3   FILE NIOSHTIC
          1   FILE NTIS
          8   FILE PASCAL
         17   FILE PROMT
          2   FILE RDISCLOSURE
         18   FILE SCISEARCH
         36   FILE TOXCENTER
  62 FILES SEARCHED...
       3483   FILE USPATFULL
        116   FILE USPAT2
         43   FILE WPIDS
         43   FILE WPINDEX

  35 FILES HAVE ONE OR MORE ANSWERS,   68 FILES SEARCHED IN STNINDEX

L4   QUE (ENZYM? OR ESTERASE OR PROTEINASE OR PROTEASE OR AMIDASE)(3A)(DEBLOCK?
       OR DEPROTECT? OR REMOV?) AND AMINE

=> s l4 and py<2001
          0*  FILE ADISINSIGHT
   6 FILES SEARCHED...
          1   FILE BIOBUSINESS
         24   FILE BIOSIS
         24   FILE BIOTECHABS
  10 FILES SEARCHED...
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        24   FILE BIOTECHDS
        12   FILE BIOTECHNO
         5   FILE CANCERLIT
        97   FILE CAPLUS
  15 FILES SEARCHED...
         7   FILE CEABA-VTB
         3   FILE CEN
  18 FILES SEARCHED...
         0*  FILE CONFSCI
         2   FILE CROPU
         3   FILE DISSABS
         2   FILE DDFB
         6   FILE DGENE
         2   FILE DRUGB
         4   FILE DRUGU
        24   FILE EMBASE
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         4   FILE ESBIOBASE
         0*  FILE FEDRIP
         0*  FILE FOREGE
         2   FILE FROSTI
         2   FILE FSTA
        27   FILE IFIPAT
        17   FILE JICST-EPLUS
  43 FILES SEARCHED...
         4   FILE LIFESCI
         0*  FILE MEDICONF
        18   FILE MEDLINE
         3   FILE NIOSHTIC
         1   FILE NTIS
  49 FILES SEARCHED...
         7   FILE PASCAL
  52 FILES SEARCHED...
         0*  FILE PHAR
         9   FILE PROMT
         2   FILE RDISCLOSURE
        14   FILE SCISEARCH
        32   FILE TOXCENTER
  62 FILES SEARCHED...
      1833   FILE USPATFULL
         6   FILE USPAT2
        32   FILE WPIDS
  67 FILES SEARCHED...
        32   FILE WPINDEX

  34 FILES HAVE ONE OR MORE ANSWERS,   68 FILES SEARCHED IN STNINDEX

L5   QUE L4 AND PY<2001

=> d rank
F1        1833   USPATFULL
F2          97   CAPLUS
F3          32   TOXCENTER
F4          32   WPIDS
F5          32   WPINDEX
F6          27   IFIPAT
F7          24   BIOSIS
F8          24   BIOTECHABS
F9          24   BIOTECHDS
F10         24   EMBASE
F11         18   MEDLINE
F12         17   JICST-EPLUS
F13         14   SCISEARCH
F14         12   BIOTECHNO
F15          9   PROMT
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F16             7   CEABA-VTB
F17             7   PASCAL
F18             6   DGENE
F19             6   USPAT2
F20             5   CANCERLIT
F21             4   DRUGU
F22             4   ESBIOBASE
F23             4   LIFESCI
F24             3   CEN
F25             3   DISSABS
F26             3   NIOSHTIC
F27             2   CROPU
F28             2   DDFB
F29             2   DRUGB
F30             2   FROSTI
F31             2   FSTA
F32             2   RDISCLOSURE
F33             1   BIOBUSINESS
F34             1   NTIS


=> file f2-34
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     8.25      27.20

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FILE 'PROMT' ENTERED AT 13:55:36 ON 23 DEC 2003
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FILE 'CEABA-VTB' ENTERED AT 13:55:36 ON 23 DEC 2003

FILE 'PASCAL' ENTERED AT 13:55:36 ON 23 DEC 2003

FILE 'DGENE' ENTERED AT 13:55:36 ON 23 DEC 2003

FILE 'USPAT2' ENTERED AT 13:55:36 ON 23 DEC 2003

FILE 'CANCERLIT' ENTERED AT 13:55:36 ON 23 DEC 2003

FILE 'DRUGU' ENTERED AT 13:55:36 ON 23 DEC 2003

FILE 'ESBIOBASE' ENTERED AT 13:55:36 ON 23 DEC 2003

FILE 'LIFESCI' ENTERED AT 13:55:36 ON 23 DEC 2003

FILE 'CEN' ENTERED AT 13:55:36 ON 23 DEC 2003

FILE 'DISSABS' ENTERED AT 13:55:36 ON 23 DEC 2003

FILE 'NIOSHTIC' ENTERED AT 13:55:36 ON 23 DEC 2003

FILE 'CROPU' ENTERED AT 13:55:36 ON 23 DEC 2003

FILE 'DDFB' ACCESS NOT AUTHORIZED

FILE 'DRUGB' ENTERED AT 13:55:36 ON 23 DEC 2003

FILE 'FROSTI' ENTERED AT 13:55:36 ON 23 DEC 2003

FILE 'FSTA' ENTERED AT 13:55:36 ON 23 DEC 2003

FILE 'RDISCLOSURE' ENTERED AT 13:55:36 ON 23 DEC 2003

FILE 'BIOBUSINESS' ENTERED AT 13:55:36 ON 23 DEC 2003

FILE 'NTIS' ENTERED AT 13:55:36 ON 23 DEC 2003

=> s ((enzym? or esterase or proteinase or protease or amidase)(3a)(deblock? or deprotect? or remov?) (1) amine) and py<2001

```
    3 FILES SEARCHED...
    6 FILES SEARCHED...
    8 FILES SEARCHED...
   11 FILES SEARCHED...
   14 FILES SEARCHED...
   20 FILES SEARCHED...
   29 FILES SEARCHED...
L6          275 ((ENZYM? OR ESTERASE OR PROTEINASE OR PROTEASE OR AMIDASE)(3A)(D
                EBLOCK? OR DEPROTECT? OR REMOV?) (L) AMINE) AND PY<2001

=> dup rem l6
DUPLICATE IS NOT AVAILABLE IN 'DGENE, RDISCLOSURE'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L6
L7           162 DUP REM L6 (113 DUPLICATES REMOVED)
                 ANSWERS '1-60' FROM FILE CAPLUS
                 ANSWERS '61-64' FROM FILE TOXCENTER
                 ANSWERS '65-83' FROM FILE WPIDS
                 ANSWERS '84-101' FROM FILE IFIPAT
                 ANSWERS '102-103' FROM FILE BIOSIS
                 ANSWERS '104-107' FROM FILE BIOTECHDS
                 ANSWERS '108-110' FROM FILE EMBASE
                 ANSWER '111' FROM FILE MEDLINE
                 ANSWERS '112-114' FROM FILE JICST-EPLUS
                 ANSWERS '115-117' FROM FILE SCISEARCH
                 ANSWERS '118-126' FROM FILE PROMT
                 ANSWERS '127-130' FROM FILE CEABA-VTB
                 ANSWER '131' FROM FILE PASCAL
                 ANSWERS '132-137' FROM FILE DGENE
                 ANSWERS '138-142' FROM FILE USPAT2
                 ANSWERS '143-144' FROM FILE DRUGU
                 ANSWERS '145-147' FROM FILE CEN
                 ANSWERS '148-150' FROM FILE DISSABS
                 ANSWERS '151-152' FROM FILE NIOSHTIC
                 ANSWERS '153-154' FROM FILE CROPU
                 ANSWERS '155-156' FROM FILE DRUGB
                 ANSWERS '157-158' FROM FILE FROSTI
                 ANSWERS '159-160' FROM FILE RDISCLOSURE
                 ANSWER '161' FROM FILE BIOBUSINESS
                 ANSWER '162' FROM FILE NTIS

=> s ((enzym?)(3a)(deblock? or deprotect? or remov?) (l) amine) and py<2001
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    6 FILES SEARCHED...
    8 FILES SEARCHED...
   11 FILES SEARCHED...
   14 FILES SEARCHED...
   20 FILES SEARCHED...
   29 FILES SEARCHED...
L8          242 ((ENZYM?)(3A)(DEBLOCK? OR DEPROTECT? OR REMOV?) (L) AMINE) AND
                PY<2001

=> s ((enzym?)(3a)(deblock? or deprotect? or remov?) (10a) amine) and py<2001
    2 FILES SEARCHED...
    3 FILES SEARCHED...
    6 FILES SEARCHED...
    8 FILES SEARCHED...
   11 FILES SEARCHED...
   14 FILES SEARCHED...
   20 FILES SEARCHED...
   28 FILES SEARCHED...
L9           69 ((ENZYM?)(3A)(DEBLOCK? OR DEPROTECT? OR REMOV?) (10A) AMINE)
                AND PY<2001

=> dup rem l9
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DUPLICATE IS NOT AVAILABLE IN 'DGENE, RDISCLOSURE'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L9
L10 50 DUP REM L9 (19 DUPLICATES REMOVED)
ANSWERS '1-20' FROM FILE CAPLUS
ANSWER '21' FROM FILE TOXCENTER
ANSWERS '22-26' FROM FILE WPIDS
ANSWERS '27-29' FROM FILE IFIPAT
ANSWERS '30-31' FROM FILE BIOTECHDS
ANSWERS '32-33' FROM FILE JICST-EPLUS
ANSWERS '34-36' FROM FILE SCISEARCH
ANSWER '37' FROM FILE PROMT
ANSWERS '38-43' FROM FILE DGENE
ANSWER '44' FROM FILE DISSABS
ANSWER '45' FROM FILE NIOSHTIC
ANSWER '46' FROM FILE CROPU
ANSWERS '47-48' FROM FILE DRUGB
ANSWERS '49-50' FROM FILE FROSTI

=>

=> d bib abs 1-37 44-50

L10 ANSWER 1 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 1
AN 2000:299975 CAPLUS
DN 132:325409
TI Detoxification of phenols and aromatic amines from polluted wastewater by using phenol oxidases
AU Husain, Qayyum; Jan, Ulfat
CS Department of Biochemistry, Faculty of Life Sciences, Aligarh Muslim University, Aligarh, 202 002, India
SO Journal of Scientific & Industrial Research (2000), 59(4), 286-293
CODEN: JSIRAC; ISSN: 0022-4456
PB National Institute of Science Communication, CSIR
DT Journal; General Review
LA English
AB A review with 94 refs. concerning detoxifying industrial wastewater contg. phenols and arom. amines using phenol oxidase enzymes is given. Topics discussed include: enzymic treatment of phenols and arom. amines; and immobilization of phenol oxidase enzymes to detoxify wastewater phenols.
RE.CNT 94 THERE ARE 94 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 2
AN 1995:406411 CAPLUS
DN 122:169068
TI Removal of phenols and aromatic amines from wastewater by a combination treatment with tyrosinase and a coagulant
AU Wada, Shinji; Ichikawa, Hiroyasu; Tatsumi, Kenji
CS National Institute for Resources and Environment, Ibaraki, 305, Japan
SO Biotechnology and Bioengineering (1995), 45(4), 304-9
CODEN: BIBIAU; ISSN: 0006-3592
PB Wiley
DT Journal
LA English
AB Removal of phenols and arom. amines from industrial wastewater by tyrosinase was investigated. A color change from colorless to dark brown was obsd., but no ppt. was formed. Colored products were easily removed by a combination treatment with tyrosinase and a cationic polymer coagulant contg. amine group, such as hexamethylenediamine-epichlorohydrin polycondensate, polyethyleneimine, or chitosan. The first two coagulants, synthetic polymers, were more effective than chitosan. Phenols and arom. amines are not pptd. by any kind of coagulants, but their enzymic reaction products are easily pptd. by a cationic polymer coagulant. These results

indicate that the combination of tyrosinase and a cationic polymer coagulant is effective in removing carcinogenic phenols and arom. amines from an aq. soln. Immobilization of tyrosinase on magnetite gave a good retention of activity (80%) and storage stability i.e., only 5% loss after 15 days of storage at ambient temp. In the treatment of immobilized tyrosinase, colored enzymic reaction products were removed by less coagulant compared with sol. tyrosinase.

L10 ANSWER 3 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 3
AN 1995:279719 CAPLUS
DN 122:168844
TI Odor removing materials using artificial enzymes
AU Shirai, Hirofusa
CS Fac. Textile Science and Technology, Shinshu Univ., Ueda, 386, Japan
SO Shikizai Kyokaishi (1994), 67(9), 564-73
CODEN: SKYOAO; ISSN: 0010-180X
PB Shikizai Kyokai
DT Journal
LA Japanese
AB The odor removing fibers having biomimetic functions have been developed by giving the enzyme-like catalytic functions of iron(III) or cobalt(II)-phthalocyanine (Fe(III)-, Co(II)-pc) derivs. and their polymers to rayon fibers. The kinetics of odor-removing mechanism of Mt-oapc supported on porous and amorphous enriched rayon stable fiber have been investigated. It was found that the foul odor substances such as thiols, **amines**, etc. can be **removed** by the **enzyme**-like reaction of Mt-oapc supported on the rayon fibers. Furthermore, the odor-removing abilities of these fibers from the room for bedridden patients, the waste water treatment place and the lavatory were evaluated. These results showed that a trace amt. of sulfur compds., which are the main components of the odor, are effectively removed below 0.1 ppb using the fiber contg. Mt-oapc. The fiber can eliminate the foul odor substances by 20 to 100 times more effectively than activated carbon, and can withstand 50 times of washing. Utilizing these characteristics, new types of odor removing materials such as mattress, quilt, blanket, woven, and nonwoven materials produced from odor-removing fibers have been developed.

L10 ANSWER 4 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 6
AN 1989:28572 CAPLUS
DN 110:28572
TI **Enzymic removal** of aromatic **amines** from waste waters
AU Cocheci, Vasile; Boeriu, Carmen
CS Inst. Politeh., Fac. Tehnol. Chim., Timisoara, Rom.
SO Revistade Chimie (Bucharest, Romania) (1988), 39(6), 531-4
CODEN: RCBUAU; ISSN: 0034-7752
DT Journal
LA Romanian
AB The effect of pH and the concn. of reagents was studied in the removal of amines (benzidine, naphthylamines, anisidines, PhNH2, chloroanilines, hydroxyanilines, etc.) from wastewaters by enzymic oxidn. with horseradish peroxidase and H2O2 followed by coagulation with FeSO4. Under the optimum conditions (pH 8.5, 1000 units peroxidase/L, 25.degree., 3 h, 20 mg Fe2+/L), the removal of benzidine and 1- and 2-naphthylamine was 99.2-99.9%, while the removal of PhNH2 and its derivs. was 96%.

L10 ANSWER 5 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 7
AN 1985:66946 CAPLUS
DN 102:66946
TI **Enzymic removal** of aromatic hydroxy compounds and aromatic **amines** from waste waters
IN Hopkins, Thomas R.
PA Phillips Petroleum Co. , USA
SO U.S., 10 pp. Cont.-in-part of U.S. Ser. No. 494,489, abandoned.

CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4485016	A	19841127	US 1984-595142	19840330 <--
	CA 1228431	A1	19871020	CA 1984-447135	19840209 <--
	JP 59213494	A2	19841203	JP 1984-91706	19840508 <--
	JP 01018794	B4	19890407		
	DK 8402373	A	19841114	DK 1984-2373	19840511 <--
	EP 126394	A1	19841128	EP 1984-105336	19840511 <--
	EP 126394	B1	19871028		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	AT 30407	E	19871115	AT 1984-105336	19840511 <--
PRAI	US 1983-494489		19830513		
	EP 1984-105336		19840511		

AB Arom. hydroxy and arom. amine compds. with water sol. of .gtoreq.0.01 mg/L are removed from wastewater by addn. of peroxidase [9003-99-0] and H2O2 generated from alc. oxidase (I) [9073-63-6], and straignt chain C1-C4 alcs. or glucose oxidase [9001-37-0] and glucose [50-99-7] in amts. of 0.1-10,000 oxidase enzyme units (U, i.e., the quantity of enzyme which catalyzes the transformation of 1 .mu.mol of substrate per min under std. conditions)/L, 0.1-10,000 U/L, and 5-10,000 mg/L, resp. Thus, a mixt. of 10 .mu.L of guaiacol (II) [90-05-1], 1 mL horseradish peroxidase soln. (100 U/mL), 5 .mu.L I soln. (1000 U/mL), 100 .mu.L MeOH [67-56-1], and 100 mL phosphate buffer (pH 7.5) were stirred at room temp. The removal of II was 51 and 98.3% after 0.2 and 1 h, resp.

L10 ANSWER 6 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 8
AN 1985:11699 CAPLUS
DN 102:11699
TI Enzymic removal of hazardous organics from industrial aqueous effluents
AU Klibanov, Alexander M.
CS Massachusetts Inst. Technol., Cambridge, MA, USA
SO Biotechnol. Mar. Sci., Proc. Annu. MIT Sea Grant Lect. Semin., 1st (**1984**), Meeting Date 1982, 259-73. Editor(s): Colwell, Rita R.; Sinskey, Anthony J.; Pariser, E. Ray. Publisher: Wiley, New York, N. Y. CODEN: 52JEAY
DT Conference
LA English
AB The enzyme, horseradish peroxidase (I) [9003-99-0] effectively removes toxic phenols and arom. amines from industrial wastewater. The addn. of I and H2O2 to wastewater results in the conversion of pollutants to an insol. form that ppts. out of the wastewater. In doing so, easily removable compds. aid in the removal of more persistent pollutants. The use of the enzyme makes the method more com. attractive.

L10 ANSWER 7 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 10
AN 1975:514896 CAPLUS
DN 83:114896
TI Enzymes as reagents in peptide synthesis. **Enzymic removal of amine** protecting groups
AU Meyers, Chester; Glass, John D.
CS Mt. Sinai Med. Sch., City Univ. New York, New York, NY, USA
SO Proceedings of the National Academy of Sciences of the United States of America (**1975**), 72(6), 2193-6
CODEN: PNASA6; ISSN: 0027-8424
DT Journal
LA English
AB A model system is described for the enzymatic deprotection of suitably masked amino groups. Nitrophenyl esters of amino acids, N-protected with trypsin-labile benzyloxycarbonylarginyl groups, were prepd. as cryst., analytically pure picrate salts. These intermediates reacted with amino compds., to form the expected peptide linkages. A pair of diasteriomeric

peptides prepd. featuring benzyloxycarbonylarginyl-L- and -D-glutaminyl sequences, were subjected to tryptic digestion. In both cases, a specific cleavage of the arginyl bond was achieved; however, the peptide contg. the L-glutaminyl residue was deprotected much more rapidly than its diasteriomer contg. the D-glutaminyl residue. The hydrolysis of the former isomer was not noticeably impeded by the presence of the latter.

L10 ANSWER 8 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2000:815644 CAPLUS
DN 134:60837
TI Removal of phenols and amines from aqueous solution by immobilized tyrosinase
AU An, Lin-kun; Ma, Lin; Quan, Jun-min; Huang, Zhong-li; Gu, Lian-quan
CS Sch. Chem. Chemical Eng., Zhongshan Univ., Canton, 510275, Peop. Rep. China
SO Zhongshan Daxue Xuebao, Ziran Kexueban (2000), 39(5), 63-67
CODEN: CHTHAJ; ISSN: 0529-6579
PB Zhongshan Daxue Xuebao Bianjibu
DT Journal
LA Chinese
AB An enzymic method for removal of phenols from wastewater was investigated. Tyrosinase was immobilized on agar gel contg. hydrophobic groups, and the yield of adsorbed protein and the residual activity were over 90% and 80%, resp. Phenols were removed from wastewater after treatment with potato Tyrosinase immobilized on N-alkyl-agar bead, and brown or dark ppt. was formed. Amines were polymd. with the oxidized products of phenol into brown ppt. in the soln. and were removed. The removal rate of substituted phenols was catechol > p-cresol > p-chlorophenol > phenol > p-methoxyphenol.

L10 ANSWER 9 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1998:685031 CAPLUS
DN 129:291312
TI Enzyme-aided removal of color from wood pulps
IN Whitmire, David R.; Maiti, Biswajit
PA USA
SO PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9844189	A1	19981008	WO 1998-US6418	19980331 <--
	W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, GW, HU, ID, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9867921	A1	19981022	AU 1998-67921	19980331 <--
PRAI	US 1997-829153		19970331		
	WO 1998-US6418		19980331		

AB In a preferred embodiment, the method includes the steps of prepg. a wood pulp; treating the wood pulp with a cellulase, preferably a cellulase with optimum pH 3-0 - 7.0, and/or solvent, preferably methylamine, to modulate the pulp-fiber-pore-structure; and treating the wood pulp with xylanase wherein the xylanase is capable of releasing chromophores from the pulp, and extg. the wood pulp to remove chromophores. The xylanase preferably is isolated from Bacillus stearothermophilus (ATCC 55696) with mol. wt. of approx. 39 kD as detd. by SDS-gel electrophoresis, pH optima of pH 6.5 to 10.5, and temp. optima of between 40 .degree.C and 75 .degree.C; or alternately, with optimal growth at pH 5.0 to 11.0 and 40 .degree.C to 75 .degree.C.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 10 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1997:372211 CAPLUS
DN 126:345246
TI Method of removing sulfur compounds from sour crude oil and sour natural gas
IN Collins, Bevan C.; Mestetsky, Pat A.; Savaiano, Nicolas J.
PA United Laboratories, Inc., USA
SO PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 9713825	A1	19970417	WO 1996-US15906	19961003	<--
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN					
	US 5807476	A	19980915	US 1995-541611	19951010	<--
	CA 2208147	AA	19970417	CA 1996-2208147	19961003	<--
	CA 2208147	C	20030107			
	AU 9672550	A1	19970430	AU 1996-72550	19961003	<--
	EP 796303	A1	19970924	EP 1996-934031	19961003	<--
	EP 796303	B1	20000419			
	R: AT, BE, DE, DK, ES, FR, GB, GR, IE, IT, NL, SE					
	AT 191924	E	20000515	AT 1996-934031	19961003	<--
	ES 2146906	T3	20000816	ES 1996-934031	19961003	<--
PRAI	US 1995-541611	A	19951010			
	WO 1996-US15906	W	19961003			

OS MARPAT 126:345246
AB A method of removing hazardous sulfur compds., such as hydrogen sulfide and sulfur dioxide, from sour crude oil and sour natural gas is described. An aq. compn. of an amine oxide surfactant, and preferably a mixt. of an amine oxide surfactant and enzymes is mixed with the sour crude oil or sour natural gas. The surfactant reacts with the hazardous sulfur compds. to eliminate the evolution of the compds. from the crude oil or gas and the enzymes act to catalyze the reaction.

L10 ANSWER 11 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1997:18695 CAPLUS
DN 126:100967
TI Selective deprotection of phthalyl protected amines. [Erratum to document cited in CA125:321263]
AU Costello, C. A.; Kreuzman, A. J.; Zmijewski, M. J.
CS Lilly Res. Lab., Lilly Corporate Cent., Indianapolis, IN, 46285, USA
SO Tetrahedron Letters (1997), 38(1), 1
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier
DT Journal
LA English
AB In Table 1, structures 7 and 8 are cor. The errors were not reflected in the abstr. or the index entries.

L10 ANSWER 12 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1996:401707 CAPLUS
DN 125:61530
TI Detergent compositions and fabric pretreatments containing amine and lipolytic enzyme

IN Lappas, Dimitris; Panandiker, Rajan Keshav; Horner, Thomas Wilhelm; Boswell, Robert Walter
PA Procter and Gamble Company, USA
SO PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9612004	A1	19960425	WO 1995-US12469	19950929 <--
	W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TT, UA, US, UZ, VN				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	WO 9612000	A1	19960425	WO 1994-US11779	19941013 <--
	W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, NO, NZ, PL, RO, RU, SI, SK, TJ, TT, UA, US, UZ, VN				
	RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	WO 9700929	A1	19970109	WO 1995-US7824	19950620 <--
	W: BR, CA, CN, JP, MX, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 833884	A1	19980408	EP 1995-924620	19950620 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE				
	BR 9510608	A	19990615	BR 1995-10608	19950620 <--
	JP 11508293	T2	19990721	JP 1995-503803	19950620 <--
	AU 9536869	A1	19960506	AU 1995-36869	19950929 <--
	CA 2233451	AA	19970403	CA 1995-2233451	19950929 <--
	EP 785981	A1	19970730	EP 1995-934562	19950929 <--
	EP 785981	B1	20020410		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	BR 9509349	A	19971125	BR 1995-9349	19950929 <--
	JP 10509468	T2	19980914	JP 1995-513248	19950929 <--
	AT 215984	E	20020415	AT 1995-934562	19950929
	US 5935271	A	19990810	US 1997-817154	19970811 <--
	US 5916862	A	19990629	US 1997-981371	19971222 <--
PRAI	WO 1994-US11779	A	19941013		
	WO 1995-US7824	A	19950620		
	WO 1995-US12469	W	19950929		

OS MARPAT 125:61530
AB A liq. detergent compn. comprises lipase and amines selected from (a) primary amines R1NH2 [R1 = C6-12 alkyl, R4X(CH2)n; R4 = C6-12 alkyl; X = O, CONH, NH; n = 1-5]; (b) tertiary amines (i) R1R2R3N [R1, R2 = C1-8 alkyl, (CH2CHR5O)xH; R3 = C6-12 alkyl, R4X(CH2)n; R4 = C4-12 alkyl; R5 = H, Me Et; X = O, CONH, NH; n = 1-5; x = 1-6]; (ii) R1R2R3N [R1 = C6-12 alkyl; R2, R3 = C1-3 alkyl, (CH2CHR5O)xH; R5 = H, Me; x = 1-2]; and/or (iii) R1CONH(CH2)nNR22 (R1 = C6-12 alkyl; R2 = C1-4 alkyl; n = 2-4); and (c) mixts. of the primary and tertiary amines. A detergent liq. was formulated primarily from C12-15 alc. ethoxylate sulfate 13.5, C12-15 alkyl sulfate 4.5, C10 amidopropyldimethylamine 1.3, Lipolase 0.18, and other detergent additives (surfactants, enzymes, etc.) the balance.

L10 ANSWER 13 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1996:641801 CAPLUS
DN 125:321263
TI Selective deprotection of phthalyl-protected amines
AU Costello, Colleen A.; Kreuzmann, Adam J.; Zmijewski, Milton J.
CS Lilly Res. Lab., Lilly Corporate Cent., Indianapolis, IN, 46285, USA
SO Tetrahedron Letters (1996), 37(42), 7469-7472
CODEN: TELEAY; ISSN: 0040-4039

PB Elsevier
DT Journal
LA English
AB Phthalyl amidase selectively deprotects phthalimido groups under very mild aq. conditions in a one-pot reaction two produce phthalic acid and the free amine. The enzyme has been shown to deprotect several primary amines of distinctly different structure, and exhibits chiral selectivity when the substrate contains extensive .beta.-branching. The enzyme has a definite requirement for ortho positioning of the functional groups on a fixed axis of rotation.

L10 ANSWER 14 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1987:29185 CAPLUS
DN 106:29185
TI Methylamine oxidase from Arthrobacter P1. A bacterial copper-quinoprotein amine oxidase
AU Van Iersel, Jack; Van der Meer, Robert A.; Duine, Johannis A.
CS Lab. Microbiol. Enzymol., Delft Univ. Technol., Delft, Neth.
SO European Journal of Biochemistry (1986), 161(2), 415-19
CODEN: EJBCAI; ISSN: 0014-2956
DT Journal
LA English
AB Methylamine oxidase from Arthrobacter P1 was purified to homogeneity. The enzyme oxidizes primary amines but not tyramine or polyamines like spermine and putrescine. The enzyme activity has a pH optimum of 8.0 with methylamine and is inhibited by certain cations as well as anions at rather low concns. The enzyme has a mol. wt. (Mr) of 167,900, a pI of 4.6, consists of 2 (probably identical) subunits (Mr 82,250), and contains 2 Cu atoms but no sugar residues. The visible absorption spectra of the enzyme as it is isolated (broad max. at 480 nm), that of its reduced form obtained on addn. of excess methylamine (max. at 470 nm), and that of phenylhydrazine-inhibited enzyme (max. at 440 nm) are very similar to those of eukaryotic Cu-contg. amine oxidases (EC 1.4.3.6). The stoichiometry of inhibition with carbonyl group reagents is also similar, since the enzyme reacted with only 1 methylhydrazine. The adduct isolated from Cu-free enzyme treated with 2,4-dinitrophenylhydrazine was identical to that found in bovine serum **amine** oxidase treated with this compd. after Cu **removal**, indicating that the **enzyme** is a Cu-quinoprotein **amine** oxidase, the 1st example of bacterial origin.

L10 ANSWER 15 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1985:165559 CAPLUS
DN 102:165559
TI Amine removal
IN Hobson, John Charles; Anderson, Deborah Anne Georgina
PA Bovril Ltd., UK
SO Eur. Pat. Appl., 24 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 132674	A2	19850213	EP 1984-107990	19840707 <--
	EP 132674	A3	19860507		
	EP 132674	B1	19901219		
	R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
	AT 59135	E	19910115	AT 1984-107990	19840707 <--
	DK 8403529	A	19850121	DK 1984-3529	19840718 <--
	AU 8430807	A1	19850124	AU 1984-30807	19840718 <--
	AU 574694	B2	19880714		
	ZA 8405540	A	19850529	ZA 1984-5540	19840718 <--
	ES 534469	A1	19860801	ES 1984-534469	19840719 <--
	JP 60043346	A2	19850307	JP 1984-151107	19840720 <--

PRAI GB 1983-19540 19830720
EP 1984-107990 19840707
AB Microbial amine-decompg. enzymes may be used to remove potentially toxic amines from food and alc. beverages. Thus, yeast was autolyzed at elevated temps. and the cell debris was removed. The resulting liquor, contg. 6-8% solids, was cooled to 35.degree., adjusted to pH 7.5-8, and treated with purified Aspergillus niger diamine oxidase [9001-53-0] at 40,000 units/L. After 2 h, the mixt. was cooled, filtered, and evapd. to form a yeast ext. No amines were detected in the product.

L10 ANSWER 16 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1985:225463 CAPLUS
DN 102:225463
TI Monitoring of aromatic amines by HPLC with electrochemical detection. Comparison of methods for destruction of carcinogenic aromatic amines in laboratory wastes
AU Barek, Jiri; Pacakova, Vera; Stulik, Karel; Zima, Jiri
CS Dep. Anal. Chem., Charles Univ., Prague, 128 40/2, Czech.
SO Talanta (1985), 32(4), 279-83
CODEN: TLNTA2; ISSN: 0039-9140
DT Journal
LA English
AB A new chem. method for destruction of carcinogenic arom. amines in lab. wastes has been developed. The method is based on enzymic oxidn. of the amines in soln. (with H2O2 and horseradish peroxidase [9003-99-0]), followed by oxidn. of the solid residues with permanganate in H2SO4 medium. To monitor the efficiency of destruction, a reversed-phase HPLC system was developed, with voltammetric detection with a C-fiber detector, which is substantially more sensitive (detection limits from a few nanograms down to a few picograms of amine) than the commonly used UV photometric detection. It is demonstrated that the proposed method of destruction is highly efficient (>99.8% destruction).

L10 ANSWER 17 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1983:40009 CAPLUS
DN 98:40009
TI Enzymic removal of hazardous pollutants from industrial aqueous effluents
AU Klibanov, A. M.
CS Dep. Nutr. Food Sci., Massachusetts Inst. Technol., Cambridge, MA, USA
SO Enzyme Engineering (1982), 6, 319-24
CODEN: ENENDT; ISSN: 0094-8500
DT Journal; General Review
LA English
AB A review with 4 refs.

L10 ANSWER 18 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1981:46150 CAPLUS
DN 94:46150
TI Acrylamide monomer removal from soil hardened with acrylamide polymers
PA Nitto Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 55135191	A2	19801021	JP 1979-41984	19790409 <--

PRAI JP 1979-41984 19790409
AB In ground stabilization with acrylamine copolymers, the toxic unreacted acrylamide [79-06-1] monomer in the ground is decompd. by simultaneous injection of Nocardia enzyme prepn. The enzyme activity is further enhanced with amines, sulfites, and(or) hydrogen sulfites. Thus, 100 g wet Nocardia cells were washed with 0.05M phosphate buffer, pH 7, and suspended in 300 mL of the same buffer. The cells were disrupted by

sonication, centrifuged, and the supernatant was fractionated with (NH4)2SO4. The protein fraction was dissolved in 50 mL water, dialyzed against water, and the dialyzate was freeze-dried to obtain 325 mg of crude enzyme prepn. Addn. of 0.2, part of the enzyme prepn. (325 mg in 200 parts water) and 2 part of K persulfate (2 part in 200 parts water) to a conventional acrylamide and Na metaacrylate ground-hardening agent decreased acrylamide monomer in treated sandy soil to <0.2 ppm, whereas in the control it was 3 ppm.

L10 ANSWER 19 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1976:44649 CAPLUS
DN 84:44649
TI Novel use of enzymes as reagents in peptide synthesis. **Enzymic removal** of **amine** protecting groups
AU Meyers, Chester A.
CS City Univ. New York, New York, NY, USA
SO (**1975**) 119 pp. Avail.: Xerox Univ. Microfilms, Ann Arbor, Mich., Order No. 75-21,524
From: Diss. Abstr. Int. B 1975, 36(4), 1690
DT Dissertation
LA English
AB Unavailable

L10 ANSWER 20 OF 50 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1955:57059 CAPLUS
DN 49:57059
OREF 49:11050i,11051a-b
TI Enzymic dealkylation of aminopyrine (pyramidon) and other alkylamines
AU La Du, Bert N., Jr.; Gaudette, Leo; Trousof, Natalie; Brodie, Bernard B.
CS Natl. Inst. of Health, Bethesda, MD
SO Journal of Biological Chemistry (**1955**), 214, 741-52
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA Unavailable
AB cf. C.A. 49, 497ch; following abstr. Aminopyrine (dimethyl-4-aminoantipyrine) and its Et and Bu homologs are dealkylated in rabbit, rat, and guinea-pig liver homogenates to yield 4-aminoantipyrine. The Me groups of aminopyrine and monomethyl-4-aminoantipyrine are converted to HCHO, and the Et group of the monoethyl homolog yields AcH. Both reduced triphosphopyridine nucleotide (TPNH) and O are required, and the dealkylation system is located in the microsomes. Diethylaminoethyl 2,2-diphenylvalerate (SKF 525-A) inhibits the dealkylation of aminopyrine and monomethyl-4-aminopyrine. This inhibitor also affects the metabolism of a diversity of other types of drug enzyme systems which are located in microsomes and require TPNH and O.

L10 ANSWER 21 OF 50 TOXCENTER COPYRIGHT 2003 ACS on STN DUPLICATE 9
AN 1983:51481 TOXCENTER
CP Copyright 2003 BIOSIS
DN PREV198324061406
TI THE **ENZYME** PEROXIDASE FOR THE **REMOVAL** OF PHENOLS AROMATIC **AMINES** AND OTHER TOXIC CHEMICALS FROM INDUSTRIAL AQUEOUS EFFLUENTS
AU KLIBANOV A M [Reprint author]; ALBERTI B N
CS LAB OF APPLIED BIOCHEMISTRY, DEP OF NUTRITION AND FOOD SCI, MASS INST OF TECHNOL, CAMBRIDGE, MA 02139, USA
SO Abstracts of Papers American Chemical Society, (**1981**) Vol. 182, pp. ENVR 42.
Meeting Info.: 182ND ACS (AMERICAN CHEMICAL SOCIETY) NATIONAL MEETING, NEW YORK, N.Y., USA, AUG. 23-28, 1981. ABSTR PAP AM CHEM SOC
CODEN: ACSRAL. ISSN: 0065-7727.
DT Conference; (Meeting)
FS BIOSIS
OS BIOSIS 1983:61406
LA ENGLISH

ED Entered STN: 20011116
Last Updated on STN: 20011116

L10 ANSWER 22 OF 50 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN DUPLICATE 5
AN 1991-148746 [20] WPIDS
DNC C1991-064355
TI Glyoxylic acid prodn. from glycolic acid - using glycolate oxidase and oxygen in presence of amine(s) and/or catalase, used in prepn. of vanillin, etc..
DC A41 B05 D16 E17
IN ANTON, D L; COSIMO, R D; GOSSER, L W; DI, COSIMO R; GOSSER, L; DICOSIMO, R
PA (DUPO) DU PONT DE NEMOURS & CO E I; (IOWA) UNIV IOWA RES FOUND
CYC 38
PI WO 9105868 A 19910502 (199120)* <--
RW: AT BE CH DE DK ES FR GB GR IT LU NL OA SE
W: AU BB BG BR FI GA HU JP KR LK MC MG MW NO RO SD SU
AU 9066115 A 19910516 (199133) <--
CN 1052143 A 19910612 (199212) <--
FI 9201558 A 19920408 (199227) <--
PT 95776 A 19920529 (199227) <--
ZA 9008258 A 19920624 (199231) 40p <--
EP 496799 A1 19920805 (199232) EN <--
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
NO 9201439 A 19920410 (199232) <--
BR 9007752 A 19920811 (199237) <--
JP 05501800 W 19930408 (199319) 10p <--
US 5219745 A 19930615 (199325) 8p <--
US 5221621 A 19930622 (199326) 7p <--
EP 496799 B1 19930908 (199336) EN 12p <--
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
DE 69003247 E 19931014 (199342) <--
AU 642439 B 19931021 (199349) <--
ES 2046797 T3 19940201 (199409) <--
HU 64598 T 19940128 (199409) <--
IE 65417 B 19951018 (199603) <--
FI 97393 B 19960830 (199641) <--
CA 2067382 C 20020514 (200240) EN
ADT FI 9201558 A WO 1990-US5659 19901011, FI 1992-1558 19920408; ZA 9008258 A ZA 1990-8258 19901016; EP 496799 A1 EP 1990-915926 19901011, WO 1990-US5659 19901011; NO 9201439 A WO 1990-US5659 19901011, NO 1992-1439 19920410; BR 9007752 A BR 1990-7752 19901011, WO 1990-US5659 19901011; JP 05501800 W JP 1990-514992 19901011, WO 1990-US5659 19901011; US 5219745 A Cont of US 1989-422011 19891016, US 1991-705419 19910524; US 5221621 A Cont of US 1989-422011 19891016, US 1991-705420 19910524; EP 496799 B1 EP 1990-915926 19901011, WO 1990-US5659 19901011; DE 69003247 E DE 1990-603247 19901011, EP 1990-915926 19901011, WO 1990-US5659 19901011; AU 642439 B AU 1990-66115 19901011; ES 2046797 T3 EP 1990-915926 19901011; HU 64598 T WO 1990-US5659 19901011, HU 1992-1286 19901011; IE 65417 B IE 1990-3677 19901015; FI 97393 B WO 1990-US5659 19901011, FI 1992-1558 19920408; CA 2067382 C CA 1990-2067382 19901011, WO 1990-US5659 19901011
FDT EP 496799 A1 Based on WO 9105868; BR 9007752 A Based on WO 9105868; JP 05501800 W Based on WO 9105868; EP 496799 B1 Based on WO 9105868; DE 69003247 E Based on EP 496799, Based on WO 9105868; AU 642439 B Previous Publ. AU 9066115, Based on WO 9105868; ES 2046797 T3 Based on EP 496799; HU 64598 T Based on WO 9105868; FI 97393 B Previous Publ. FI 9201558; CA 2067382 C Based on WO 9105868
PRAI US 1989-422011 19891016
AN 1991-148746 [20] WPIDS
AB WO 9105868 A UPAB: 19930928
Prodn. of glyoxylic acid comprises contacting, in aq. soln. at pH 7-10, glycolic acid, glycolate oxidase and O2 in the presence of additive(s) (I) that improve the yield of glyoxylic acid, and where the initial concn. of glycolic acid is 200-2500 mM.

Initial glycolic acid concn. is pref. 250-1500, esp. 500-1000mM. Reaction pH is 8.0-9.5, and may be 9.5 at the start of reaction and

allowed to fall to 8.0 as reaction proceeds. Additives (I) are amines from ethylenediamine and/or tris(hydroxy tris(hydroxymethyl)methylamine; or catalase; or catalase plus amine. The initial amine: glycolic acid ratio is 1.0-3.0 (1.0-2.0), esp. 1.05-1.33. Concnc. of catalase is 50-100,000 IU/ml, esp. 350-14,00 IU/ml. Ratio of catalase to glycolate oxidase is at least 250:1.

USE/ADVANTAGE - Relatively high glycolic acid concns. are used, suitable for commercial prodn. High yields are obtd. at high conversion, with efficient use of costly enzymes. Glyoxylic acid is useful in prepn. of vanillin, ethylvanillin or ion exchange resins, and as an acid catalyst in the pharmaceutical industry.

0/0

ABEQ JP 05501800 W UPAB: 19931113

Prodn. of glyoxylic acid comprises contacting, in aq. soln. at pH 7-10, glycolic acid, glycolate oxidase and 02 in the presence of additive(s) (I) that improve the yield of glyoxylic acid, and where the initial concn. of glycolic acid is 200-2500 mM.

Initial glycolic acid concn. is pref. 250-1500, esp. 500-1000 mM. Reaction pH is 8.0-9.5, and may be 9.5 at the start of reaction and allowed to fall to 8.0 as reaction proceeds. Additives (I) are amines from ethylenediamine and/or tris(hydroxy tris(hydroxymethyl)methylamine; or catalase; or catalase plus amine. The initial amine; glycolic acid ratio is 1.0-3.0 (1.0-2.0), esp. 1.05-1.33. Concn. of catalase is 50-100,000 IU/ml, esp. 350-14,00 IU/ml. Ratio of catalase to glycolate oxidase is at least 250:1.

USE/ADVANTAGE - Relatively high glycolic acid concns. are used, suitable for commercial prodn. High yields are obtd. at high conversion, with efficient use of costly enzymes. Glyoxylic acid is useful in prepn. of vanillin, ethylvanillin or ion exchange resins, and as an acid catalyst in the pharmaceutical industry.

ABEQ US 5219745 A UPAB: 19931116

Prodn. of glyoxylic acid is by contacting glycolic acid, at initial concn. 200-2500 (250-1500)nM, with 0.001-1000IU/ml glycolate oxidase in aq. soln. at pH 7-10 in presence of 50-100000 (350-14000)IU/ml of catalase and an amine viz. ethylene diamine, tris(hydroxymethyl)methylamine or mixts., at initial molar ratio of glycolic acid of 1.0-3.0 (1.0-2.0). The glyoxylic acid is recovered after **removal** or residual **enzymes** by filtration and/or heating and of residual **amines** by ion exchange resin. Pref. the ratio of catalase to glycolate oxidase is at least 200:1. Temp. is 0-40 (20-40) deg. C, but without freezing. Pref. up to 50 atmos. of 02 is added through permeable membrane, and 2.0 nM or less of flavin mononucleotide is present.

ADVANTAGE - The process is commercially practical giving good yield and high conversion and selectivity with efficient use of expensive enzymes.

Dwg.0/0

ABEQ US 5221621 A UPAB: 19931116

Prodn. of glyoxylic acid comprises contacting glycolic acid, glycolate oxidase and 02 in aq. soln. at pH 7-10 in the presence of catalase. The initial concn. of glycolic acid is 200-2500 (250-1500)mM. The glycolate oxidase is pref. present at 0.001-1000 10/ml and the pH is pref. 8-9.5. The reaction is at 0-40 deg.C provided that the temp. is not so low than the water freezes.

USE/ADVANTAGE - The process gives higher yields using the enzymes efficiently.

Dwg.0/0

ABEQ EP 496799 B UPAB: 19931122

A process for the production of glyoxylic acid comprising contacting, in aqueous solution at a pH of about 7 to 10, glycolic acid, glycoate oxidase and oxygen in the presence of an effective amount of one or more additives that improve the yield of the glycoxylic acid; and wherein the initial concentration of the glycolic acid is 200 mM to about 2,500 mM.

Dwg.0/0

L10 ANSWER 23 OF 50 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN

AN 1993-205366 [25] WPIDS
DNC C1993-091077
TI Linear methacrylic tri block polymers for surface modification - each block having different compsn. with at least one hydrophilic and one hydrophobic block.
DC A14
IN DICKER, I B; HERTLER, W R; MA, S
PA (DUPO) DU PONT DE NEMOURS & CO E I
CYC 18
PI US 5219945 A 19930615 (199325)* 8p <--
WO 9317057 A1 19930902 (199336) EN 30p <--
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
W: JP
EP 626977 A1 19941207 (199502) EN <--
R: DE FR GB IT NL
JP 07503990 W 19950427 (199525) 10p <--
EP 626977 B1 19970709 (199732) EN 12p <--
R: DE FR GB IT NL
DE 69312057 E 19970814 (199738) <--
JP 3249120 B2 20020121 (200207) 10p
ADT US 5219945 A US 1992-838165 19920220; WO 9317057 A1 WO 1993-US1277 19930212; EP 626977 A1 EP 1993-905042 19930212, WO 1993-US1277 19930212; JP 07503990 W JP 1993-514901 19930212, WO 1993-US1277 19930212; EP 626977 B1 EP 1993-905042 19930212, WO 1993-US1277 19930212; DE 69312057 E DE 1993-612057 19930212, EP 1993-905042 19930212, WO 1993-US1277 19930212; JP 3249120 B2 JP 1993-514901 19930212, WO 1993-US1277 19930212
FDT EP 626977 A1 Based on WO 9317057; JP 07503990 W Based on WO 9317057; EP 626977 B1 Based on WO 9317057; DE 69312057 E Based on EP 626977, Based on WO 9317057; JP 3249120 B2 Previous Publ. JP 07503990, Based on WO 9317057
PRAI US 1992-838165 19920220
AN 1993-205366 [25] WPIDS
AB US 5219945 A UPAB: 19931130
Linear methacrylic ABC triblock polymer is claimed, in which the compsn. of each block is different, having at least one hydrophilic block and at least one hydrophobic block.

ADVANTAGE - The process is commercially practical giving good yield and high conversion and selectivity with efficient use of expensive enzymes.

Pref. the B block does not contain a significant amt. of the components of A and C blocks, and two or all three of the blocks are mutually miscible. A and C blocks are hydrophobic and the B block is hydrophilic, or vice versa. A and C blocks differ in stiffness, T4, and polarity from the B block.

USE/ADVANTAGE - Useful for surface modification e.g. for modification of biological surfaces and pigment surfaces; as dispersing agents for pigments in organic and/or aq. media e.g. for dispersing carbon black; and as compatabilisers for polymer blends and stabilisers for the dispersion of fluids. The triblock polymer may be designed to be active at air-liq. interfaces, solid-solid interfaces, liq.-liq. interfaces and liq.-solid interfaces. (Reprinted in week 9341 with amended abstract)
Dwg.0/0
ABEQ WO 9317057 A UPAB: 19931122
Prodn. of glyoxylic acid comprises contacting glycolic acid, at initial concn. 200-2500 (250-1500)nM, with 0.001-1000IU/ml glycolate oxidase in aq. soln. at pH 7-10 in presence of 50-100000 (350-14000)IU/ml of catalase and an amine viz. ethylene diamine, tris(hydroxymethyl)methylamine or mixts., at initial molar ratio of glycolic acid of 1.0-3.0 (1.0-2.0). The glyoxylic acid is recovered after **removal** or residual **enzymes** by filtration and/or heating and of residual **amines** by ion exchange resin. Pref. the ratio of catalase to glycolate oxidase is at least 200:1. Temp. is 0-40 (20-40) deg. C, but without freezing. Pref. up to 50 atmos. of O2 is added through permeable membrane, and 2.0 nM or less of flavin mono-nucleotide is present.

ADVANTAGE - The process is commercially practical giving good yield and high conversion and selectivity with efficient use of expensive

enzymes.
Dwg.0/0
ABEQ EP 626977 B UPAB: 19970806
A linear methacrylic ABC triblock polymer in which the composition has at least one hydrophilic block and at least one hydrophobic block, wherein each of the blocks contain at least three units of monomer and consist of a methacrylic homopolymer or its salt, or a linear methacrylic random copolymer or its salts.
Dwg.0/0

L10 ANSWER 24 OF 50 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 1982-59703E [29] WPIDS
TI 3-Formyl-methyl cephalosporin intermediates for 3-thio-vinyl cpds. - have a 7-2-2-amino-4-thiazolyl 2-carboxy-methoxy-imino acetamido gp. and are prepd. by hydrolysis of corresp. 3-enamine.
DC B02
IN LEROY, P; MOUTONNIER, C; PEYRONEL, J F
PA (RHON) RHONE POULENC IND
CYC 13
PI EP 53962 A 19820616 (198229)* FR 50p <--
R: AT BE CH DE FR GB IT LI LU NL SE
FR 2494277 A 19820521 (198232) <--
JP 57116085 A 19820719 (198234) <--
US 4415735 A 19831115 (198348) <--
EP 53962 B 19850313 (198511) FR <--
R: AT BE CH DE FR GB IT LI LU NL SE
DE 3169296 G 19850418 (198517) <--
ADT EP 53962 A EP 1981-401825 19811119
PRAI FR 1979-16842 19790629; FR 1980-24636 19801120
AN 1982-59703E [29] WPIDS
AB EP 53962 A UPAB: 19930915
7-(2-(2-R4-NH-thiazol-4-yl) 2-(R5OOC-CR'R"-O-N=)acetamido)-3-(OHC-CH2-) 4-(R2OOC)-cephem derivs. of formula (I), as the separate isomers or their mixts., are new. The cpds. have syn or anti configuration, n is 0 or 1; R', R" independently are H or alkyl or together are 2-3C alkylene; R5 is H or an acid protecting gp.; R4 is an **amine** protecting gp.; R2 is an easily **enzymatically removable** -CHR9-COOR8 gp. or an acid protecting gp.; R8 is alkyl or cyclohexyl and R9 is H or alkyl.
Alkyl gps. are opt. branched 1-4C groups and the prod. is a 3-oxoethyl-bicyclooct-2- or 3-ene or a 3-oxoethylidene-bicyclooctane, when n is 0, and is a 3-oxoethyl-bicyclooct-2-ene or 3-oxoethylidene-bicyclooctane, when n is 1.
(I) are intermediates for the prepn. of 3-thiovinyl-cephalosporins (XV), having a 3-RS-CH=CH- gp. (where R is alkyl, L-2-amino-2-carboxy-ethyl, phenyl, 2-, 3- or 4-pyridyl and their N-oxides, 2-pyrimidinyl, 3-pyridazinyl (6-substd. by alkyl, methoxy, amino or acylamino), triazine derivs., triazole derivs., etc. (XV) have good antibacterial activity against both gram negative and gram positive bacteria.
ABEQ EP 53962 B UPAB: 19930915
A cephalosporin, characterised in that it corresponds to the general formula (I) in the syn or anti form, in which n is 0 or 1, the radicals Ra5 and Rb5, which are identical or different, represent hydrogen atoms or alkyl radicals or together form an alkylene radical containing 2 or 3 carbon atoms, Rc5 represents a hydrogen atom or an acid-protecting radical, R4 represents an **amine**-protecting radical and the symbol R2 represents an **enzymatically** easily **removable** radical of the general formula -CHR9-OCOR8 (in which R8 represents an alkyl radical or the cyclohexyl radical and R9 represents a hydrogen atom or an alkyl radical) or an acid-protecting radical, the alkyl portions or radicals mentioned above being linear or branched and containing 1 to 4 carbon atoms, and the product being in the 3-oxoethyl bicyclooct-2-ene or 3-oxoethyl- bicyclooct-3-ene or 3-oxoethylidene -bicyclooctane form if n = 0 and in the 3-oxoethyl- bicyclooct-2-ene or 3-oxoethylidene -bicyclooctane form if n = 1, as well as mixtures of their isomers.

L10 ANSWER 25 OF 50 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 1982-48507E [24] WPIDS
TI 3-Amino-vinyl cephalosporin intermediates for 3-thio-vinyl cpds. - are 7-substd. by two 2-amino-4-thiazolyl 2-carboxy-methoxy-imino acetamido gps..
DC B02
IN FARGE, D; LEROY, P; MOUTONNIER, C; PEYRONEL, J F
PA (RHON) RHONE POULENC IND
CYC 13
PI EP 53537 A 19820609 (198224)* FR 51p <--
R: AT BE CH DE FR GB IT LI LU NL SE
FR 2494275 A 19820521 (198227) <--
JP 57114593 A 19820716 (198234) <--
US 4423214 A 19831227 (198403) <--
EP 53537 B 19840725 (198430) FR <--
R: AT BE CH DE FR GB IT LI LU NL SE
DE 3165118 G 19840830 (198436) <--
JP 03045078 B 19910709 (199131) <--
ADT EP 53537 A EP 1981-401823 19811119; US 4423214 A US 1981-322949 19811119; JP 03045078 B JP 1981-185560 19811120
PRAI FR 1979-13096 19790523; FR 1980-24634 19801120
AN 1982-48507E [24] WPIDS
AB EP 53537 A UPAB: 19930915
7-(2-(2R1-NH-4-thiazolyl) 2-(R500C-CRR'-O-N=)-acetamido 3-(R3R4N-CH=CH-)-4-(R2OOC-)-2or3-cephem derivs of formula (I) and mixtures of their isomers are new. The double bond may be in position 2 or 3; the 3-subtit. has E or Z configuration; the imino group on the 7-substit. has syn or anti configuration; R,R' each are H or alkyl or together are 2-3C alkylene; R5 is an acid protecting gp; R1 is an amine protecting gp; R2 is a gp of formula R700C-CHR6-, methoxy-methyl, tert-butyl, benzhydryl, p-nitro-benzyl or p-methoxy-benzyl; R6 is H or alkyl; R7 is alkyl or cyclohexyl R3, R4 each are alkyl (opt. substd. hydroxy, alkoxy amino or mono- or di-alkylamino) or phenyl or together with the N atom form a 5-6 membered saturated heterocyclic, opt. contg. a further N, O or S heteroatom and opt. substd. by alkyl. Alkyl gps above have 1-4C atoms except where otherwise indicated.
(I) are intermediates for 3-thio-vinyl cephalosporins, which are known antibacterials active against gram-negative and gram positive bacteria.
ABEQ US 4423214 A UPAB: 19930915
3-Vinylcephalosporin of formula (I) is new: (in form of bicyclooct-2-ene or bicyclooct-3-ene in which the substit. in the 3 position of the bicyclooctene is in the E or Z form or their mixt.; and the imine gp. of the substit. in the 7 position is in the syn or anti-form or their mixt.; R5a and R5b, opt. same, are H or alkyl, or together 2-3C alkylene; R5c is an acid protecting radical; R1 is an amine protecting radical; R2 is -CH(R6)-OCOR7 radical which can easily be removed by enzymatic method in which R6 is H or alkyl, and R7 is alkyl or cyclohexyl, or R2 is methoxymethyl, t-butyl, benzhydryl, p-nitrobenzyl or p-methoxybenzyl; and R3 and R4 opt. same, are alkyl opt. substd. by hydroxy, alkoxy, amino, (di)alkylamino or phenyl, or together form with N-atom to which they are attached, a satd. heterocyclic 5 or 6 membered ring, opt. contg. other heteroatom from N, O or S, and is opt. substd. by alkyl, the above alkyls being opt. branched 1-4C unless otherwise stated).
Specific (I) is 2-benzhydryloxy carbonyl-3-(2-dimethyl aminovinyl)-7-(2 -(2t-butoxycarbonyl prop-2-yloxyamino) -2-(2-tritylaminothiazol-4 -yl)acetamido)-8 oxa-5-thia-1-azabicyclo(4.2.0)oct-2-ene.
(I) are useful intermediates for mfg. biologically active caphalosporins.
ABEQ EP 53537 B UPAB: 19930915
3-Vinylcephalosporin derivs. of formula (I) in the form of a bicyclooct-2-ene or bicyclooct-3-ene, and in which (i) the substituent in the 3-position of the bicyclooctene exhibits E or Z stereoisomerism; (ii) the imine gp. of the substituent in the 7-position is in the syn or anti

form; (iii) the radicals Ra5 and Rb5 (same or different) are H or alkyl or together form a 2 or 3C alkylene gp.; (iv) Rc5 is an acid-protecting gp.; (v) R1 is an **amine**-protecting radical (vi) R2 is a gp. which is easily **removed** by an **enzymatic** method, of formula -CH(R6)-OCOR7 where R6 = H or alkyl and R7 = alkyl or cyclohexyl) or is a methoxymethyl, t-butyl, benzhydryl, p-nitrobenzyl or p-methoxybenzyl gp.; and (vi) R3 and R4 (same or different) are alkyl (opt. substd. by OH, alkoxy, amino, alkylamino or dialkylamino gp.) or phenyl radicals or together with the N atom to which they are attached form a satd. 5- or 6-membered heterocyclic gp. opt. contg. another hetero atom chosen from N, O and S, and opt. substd. by alkyl; (vii) the alkyl portions or alkyl radicals contg. 1-4C and being linear or branched unless otherwise stated; and mixts. of its isomers are new.

ADVANTAGE - (I) exhibit high in vitro and in vivo antimicrobial activity w.r.t. Gram-positive and -negative bacteria.

L10 ANSWER 26 OF 50 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 1982-43893E [22] WPIDS
TI Immobilised enzyme regeneration - using hydrohalic acid to remove inactivated enzyme.
DC A97 B04 D16
IN FISCHER, J; HETTWER, W; MANSFELD, H W; SCHELLENBE, A; WAHL, G
PA (TEMI-N) INST TECHN MIKROBIO
CYC 1
PI DD 153130 A 19811223 (198222)* 8p <--
PRAI DD 1980-223879 19800912
AN 1982-43893E [22] WPIDS
AB DD 153130 A UPAB: 19930915
Regeneration of immobilised enzymes, esp. based on an **amine** -functionalised styrene-divinylbenzene copolymer, is effected by (a) **removing** inactivated **enzymes** by treating with aq. hydrohalic acid at 20-85 deg.C for 2-0 hrs., (b) reactivating the support, and (c) reloading the activated support with enzymes.

The specified enzyme is glucoamylase (GA). Step (a) is pref. effected with 1-10M HCl. Step (b) is pref. effected by treatment with glutaraldehyde or 1,4-benzoquinone.

Unlike prior art processes, the process is capable of removing covalently bound enzymes from organic supports.

L10 ANSWER 27 OF 50 IFIPAT COPYRIGHT 2003 IFI on STN
AN 03376571 IFIPAT;IFIUDB;IFICDB
TI PROCESS FOR PRODUCING 6-AMINO-PENICILLANIC ACID AND PHENYLACETIC ACID; PREPARATION OF COMPOUNDS FROM PENICILLIN PRODUCING MICROORGANISM; PURIFYING PENICILLIN CULTURE BROTH BY SEPARATING THE BIOMASS AND ULTRAFILTRATING REMAINING BROTH, INCUBATION WITH ENZYME, SEPARATING AND RECOVERING COMPOUNDS
INF Fraile Yecora; Nieves, Leon, ES
Gonzalez De Prado; Emiliano, Leon, ES
Oliver Ruiz; Manuel, Leon, ES
Salto Maldonado; Francisco, Madrid, ES
Vitaller Alba; Alejandro, Leon, ES
IN Fraile Yecora Nieves (ES); Gonzalez De Prado Emiliano (ES); Oliver Ruiz Manuel (ES); Salto Maldonado Francisco (ES); Vitaller Alba Alejandro (ES)
PAF Antibioticos, S.A., Madrid, ES
PA Antibioticos ES (4497)
EXNAM Marx, Irene
AG Ladas & Parry
PI US 6110699 A 20000829
WO 9735029 19970925
AI US 1998-952311 19980225
WO 1997-ES66 19970314
19980225 PCT 371 date
19980225 PCT 102(e) date
XPD 14 Mar 2017
PRAI ES 1996-637 19960315

FI US 6110699 20000829
DT Utility
FS CHEMICAL
GRANTED
MRN 009674 MFN: 0153
CLMN 12
AB Alternative process for obtaining 6-aminopenicillanic acid. The process comprises replacing the stages of extraction with organic solvents and isolation and separation of the intermediate penicillin salt as a solid by a process of ultrafiltration of the culture broth in at least 2 successive stages. The first stage has a cut-off for molecular weights of 20,000 Dalton and the second, 2000 Dalton. Subsequent to the enzyme conversion stage the products from that stage are subjected to a series of anionic exchange chromatography steps.

FIG-01

CLMN 12

L10 ANSWER 28 OF 50 IFIPAT COPYRIGHT 2003 IFI on STN
AN 02747878 IFIPAT;IFIUDB;IFICDB
TI GENES ENCODING AND METHOD OF EXPRESSING A NOVEL **ENZYME**: PHTHALYL AMIDASE; EFFECTS **REMOVAL** OF THE PHTHALYL GROUP FROM A PHTHALAMIDE-BLOCKED **AMINE**; PROTECTION OF AMINE GROUPS IN THE SYNTHESIS OF ANTIBIOTICS, E.G. CARBOCEPHALOSPORINS, AND PEPTIDES
INF Queener, Stephen W, Indianapolis, IN
Zock, Joseph M, Greenwood, IN
IN Queener Stephen W; Zock Joseph M
PAF Eli Lilly and Company, Indianapolis, IN
PA Lilly, Eli and Co (49800)
EXNAM Wax, Robert A
EXNAM Hendricks, Keith D
AG Blalock, Donna K
Boone, David E
Cantrell, Paul R
PI US 5543497 A 19960806
AI US 1995-446382 19950522
XPD 15 Jul 2014
RLI US 1994-275490 19940715 DIVISION 5451522
FI US 5543497 19960806
US 5451522
DT Utility; CERTIFICATE OF CORRECTION
CDAT 26 May 1998
FS CHEMICAL
GRANTED
CLMN 4
GI 2 Drawing Sheet(s), 2 Figure(s).
AB Phthalyl amidase is an enzyme previously unknown in the art that catalyzes removal of the phthalyl moiety from phthalyl-containing amides. The current invention provides DNA compounds encoding the phthalyl amidase enzyme and methods for expressing such compounds. The present invention also provides recombinant DNA vectors encoding phthalyl amidase and host cells transformed with these DNA vectors.
CLMN 4
GI 2 Drawing Sheet(s), 2 Figure(s).

L10 ANSWER 29 OF 50 IFIPAT COPYRIGHT 2003 IFI on STN
AN 01494698 IFIPAT;IFIUDB;IFICDB
TI 3-VINYLCEPHALOSPORIN DERIVATIVES
INF Farge, Daniel, Thiais, FR
Moutonnier, Claude, Le Plessis Robinson, FR
Peyronel, Jean-Francois, Palaiseau, FR
Roy, Pierre L, Thiais, FR
IN FARGE DANIEL (FR); MOUTONNIER CLAUDE (FR); PEYRONEL JEAN-FRANCOIS (FR); ROY PIERRE L (FR)

PAF Rhone-Poulenc Industries, Paris Cedex, FR
PA RHONE-POULENC INDUSTRIES FR (1689)
EXNAM Coughlan, Jr, Paul M
AG Stevens, Davis, Miller & Mosher
PI US 4423214 A 19831227
AI US 1981-322949 19811119
DCD 22 Dec 1998
XPD 19 Nov 2001
PRAI FR 1980-24634 19801120
FI US 4423214 19831227
DT Utility; EXPIRED
FS CHEMICAL
GRANTED
MRN 003961 MFN: 0956
004081 0482
CLMN 4
AB New 3-vinylcephalosporin derivatives of the general formula:

2-(R2-OOC-),3-(R3-N(-R4)-CH=CH-),7-((2-(R1-NH-)THIAZOL-4-YL)-C(=N--O-C(-RA5)(-RB5)-COO-RC5)-CO-NH-)-2-CEPHEM OR THE 3-CEPHEM COMPOUND

in the form of a bicyclooct-2-ene or bicyclooct-3-ene, in which formula R5a and R5b are hydrogen atoms or alkyl radicals, or together form an alkyl radical containing 2 or 3 carbon atoms, R5c is an acid-protecting radical, R1 is an amino-protecting radical, R2 is an acid-protecting radical or a radical which can be removed by an enzymatic method, and R3 and R4, which are identical or different, represent alkyl (optionally substituted by hydroxyl, alkoxy, amino, alkylamino or dialkylamino) or phenyl, or together form, with the nitrogen atom, a saturated heterocyclic ring of 5 or 6 members, optionally containing another hetero-atom, their E and Z forms, and their syn and anti forms, and mixtures thereof, and also their preparation. These new compounds are useful as intermediates for the preparation of biologically active cephalosporins.
CLMN 4

L10 ANSWER 30 OF 50 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT/ISI on STN
AN 1996-03870 BIOTECHDS
TI Biological elimination of traces of dihalocarboxylic acids from aq. solutions of amino acids;
dihalocarboxylic acid e.g. dichloroacetic acid removal from amino acid derivative cosmetic composition by Xanthobacter autotrophicus for irritation reduction
AU Favre-Bulle; Ricca J M
PA Rhone-Poulenc-Chimie
LO Courbevoie, France.
PI EP 694527 **31 Jan 1996**
AI EP 1995-401739 24 Jul 1995
PRAI FR 1994-9287 27 Jul 1994
DT Patent
LA French
OS WPI: 1996-079060 [09]
AN 1996-03870 BIOTECHDS
AB A new method for elimination of traces of dihalocarboxylic acids (present at less than 200 ppm) from aq. solutions of amino acids (preferably with at least 20 wt% amino acids or amino acid derivatives) involves treatment with a microorganism (preferably Xanthobacter autotrophicus ATCC 43050 present at 10-50 ppm) containing an enzyme specific to the dihalocarboxylic acid or by treating the solution with 1-5 ppm of the specific enzyme produced by the microorganism. The method is useful for removal of impurities e.g. dichloroacetic acid and its salts from amino acid solutions, prepared from condensation of an **amine** derivative and a halocarboxylic acid. The **enzyme** treatment **removes** impurities efficiently using very low concentrations of

the microorganism or the enzyme. The purified amino acid solution is useful as a surfactant (alkylamidopropylbetaine, etc.) or sequestrant (EDTA) in cosmetic applications. The dihalocarboxylic acid impurities must be removed because they are irritants. (6pp)

L10 ANSWER 31 OF 50 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT/ISI on STN
AN 1992-04953 BIOTECHDS
TI Hydrolysis of penicillin G by combination of immobilized penicillin-acylase and electrodialysis; benzylpenicillin hydrolysis to 6-aminopenicillanic acid using Bacillus megaterium penicillin-amidase with electrodialysis to overcome phenylacetic acid by-product inhibition
AU Ishimura F; Suga K I
CS Toyo-Jozo
LO Research Laboratories, Toyo Jozo Co., Ltd., Mifuku, Ohito-Cho, Tagata-Gun, Shizuoka 410-23, Japan.
SO Biotechnol.Bioeng.; (**1992**) 39, 2, 171-75
CODEN: BIBIAU
DT Journal
LA English
AN 1992-04953 BIOTECHDS
AB Phenylacetic acid (PAA), a by-product of benzylpenicillin (BP) hydrolysis by Bacillus megaterium B-400 penicillin-amidase (PA, EC-3.5.1.11), was removed from a reaction mixture continuously and accumulated in concentrated solution by means of electrodialysis (ED). The reaction was performed by circulating the reaction mixture between an immobilized enzyme column (porous polyacrylamide fiber support) operated at 34 deg, a vessel for pH adjustment and the ED unit. ED was performed using a constant voltage of 30 V between the electrodes. Using 268 and 537 mM BP solution and 5540 U of PA, the PAA concentration in the reaction mixture was maintained at less than 81 and 126 mM, respectively, and eventually 86 and 88%, respectively, of PAA produced were removed from the mixture at the end of the hydrolysis. Times required to reach 96% and 94.8% conversion to 6-aminopenicillanic acid from 268 and 537 mM of initial BP was reduced to 65% and 64%, respectively, by ED, while 3.0% and 4.3% of initial BP of 268 and 537 mM were permeated out of the reactor, respectively. Loss of BP by permeation was reduced to 4.3 and 3.4% by repeated addition of BP. (14 ref)

L10 ANSWER 32 OF 50 JICST-EPlus COPYRIGHT 2003 JST on STN DUPLICATE 4
AN 940218076 JICST-EPlus
TI Development of Odor Removing Fiber Modelled Enzyme Functions.
AU SHIRAI HIROFUSA
CS Shinshu Univ., Faculty of Textile Science and Technology
SO Nippon Kagakkaishi (Journal of the Chemical Society of Japan, Chemistry and Industrial Chemistry), (1994) no. 1, pp. 1-11. Journal Code: F0226B (Fig. 17, Tbl. 6, Ref. 21)
CODEN: NKAKB8; ISSN: 0369-4577
CY Japan
DT Journal; Article
LA Japanese
STA New
AB The odor removing fibers having biomimetic functions have been developed applying the enzyme-like catalytic functions of iron(III) or cobalt(II)phthalocyanine (Fe(III)-, Co(II)-pc) derivatives and their polymers. The oxidoreductase role as antidote against poisonous substance invading the body by activating oxygen in the blood. We have studied the kinetics of model reaction of Fe (III)- or Co (II) -pc derivatives and their polymers, which have similar structure to active center, hematoporphirine IX, of oxidation-reduction enzymes. The Fe(III)- or Co(II)-pc derivatives and remarkably effective catalyst for the metal complexes. Next, various kinds of new odor removing materials by supporting Fe(III)-, Co(II)-octacarboxyphthalocyanines {M-oapc, M=Fe(III), Co(II)} on various polymer materials and fiber have been developed. The kinetics of odor removing mechanism of Mt-oapc supporting on porous and

amorphous enriched rayon stable fiber have been also investigated. It was found that the foul oder substances such as thiols, **amines**, etc. can be **removed** by the **enzyme**-like reaction of Mt-oapc supporting on the rayon fibers. Further, the odor-removing abilities of these fibers by the room for bedridden patients, waste water treatment place and lavatory were evaluated. These results showed trace amount sulfur compounds which are main compound in odor were effectively removed less than 0.1 ppb using the fiber containing Mt-oapc. The fiber eliminated more quantity of the foul oder substances by 20 to 100 times than did activated carbon, and can withstand 50 times of washing. Applying these properties, new types of odor-removers such as mattress, quilt, blanket, wad, woven, and nonwoven materials produced from odor-removing fibers have been developed. (author abst.)

L10 ANSWER 33 OF 50 JICST-EPlus COPYRIGHT 2003 JST on STN
AN 960081919 JICST-EPlus
TI Odor Removing Effects and Application Using Metallophthalocyanine Derivatives.
AU SHIRAI HIROFUSA
YOKOZEKI TOKUJI
CS Shinshu Univ., Text. Sci. and Technol.
Hanazono Hosp.
SO Shuki no Kenkyu (Journal of Odor Research and Engineering), (1995) vol. 26, no. 6, pp. 343-352. Journal Code: S0864A (Fig. 14, Tbl. 3, Ref. 16)
ISSN: 0913-4883
CY Japan
DT Journal; Article
LA Japanese
STA New
AB The odor removing Metallophthalocyanine derivatives having biomimetic functions have been developed by giving the enzyme-like catalytic functions of iron(III) or cobalt(II)-phthalocyanine(Fe(III)-, Co(II)-pc) derivatives and their polymers. The kinetics of odor-removing mechanism of Mt-oapc supported on porous and amorphous enriched rayon stable fiber have been investigated. It was found that the foul oder substances such as thiols, **amines**, etc. can be **removed** by the **enzyme**-like reaction of Mt-oapc supported on the rayon fibers. Furthermore, the odor-removing abilities of these fibers from the room for bedridden patients, the waste water treatment place and the lavatory were evaluated. These results showed a trace amount of sulfur compounds which are main component in odor are effectively removed below 0.1ppb using the fiber containing Mt-oapc. The fiber can eliminate the foul oder substances by 20 to 100 times more effective than activated carbon, and can withstand 50 times of washing. Utilijing these characteristics, new types of odor-removers such as mattress, quilt, blanket, wad, woven, and nonwoven materials produced from odor-removing fibers have been developed. (author abst.)

L10 ANSWER 34 OF 50 SCISEARCH COPYRIGHT 2003 THOMSON ISI on STN
AN 88:464072 SCISEARCH
GA The Genuine Article (R) Number: P6552
TI **ENZYMATIC REMOVAL** OF AROMATIC-**AMINES** FROM WASTE-WATERS
AU COCHECI V (Reprint); BOERIU C
CS FAC TEHNOL CHIM TIMISOARA, INST POLITEHN, TIMISOARA, ROMANIA (Reprint)
CYA ROMANIA
SO REVISTA DE CHIMIE, (1988) Vol. 39, No. 6, pp. 531-534.
DT Article; Journal
FS ENGI
LA Romanian
REC No References Keyed

L10 ANSWER 35 OF 50 SCISEARCH COPYRIGHT 2003 THOMSON ISI on STN
AN 81:586092 SCISEARCH
GA The Genuine Article (R) Number: MA984

TI THE **ENZYME** PEROXIDASE FOR THE **REMOVAL** OF PHENOLS, AROMATIC-**AMINES** AND OTHER TOXIC-CHEMICALS FROM INDUSTRIAL AQUEOUS EFFLUENTS
AU KLIBANOV A M (Reprint); ALBERTI B N
CS MIT, DEPT NUTR & FOOD SCI, APPL BIOCHEM LAB, CAMBRIDGE, MA, 02139
CYA USA
SO ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, (**1981**) Vol. 182, No. AUG, pp. 42-ENVR.
DT Conference; Journal
LA ENGLISH
REC No References

L10 ANSWER 36 OF 50 SCISEARCH COPYRIGHT 2003 THOMSON ISI on STN
AN 75:229029 SCISEARCH
GA The Genuine Article (R) Number: AG703
TI ENZYMES AS REAGENTS IN PEPTIDE-SYNTHESIS - **ENZYMATIC REMOVAL** OF **AMINE** PROTECTING GROUPS
AU MEYERS C (Reprint); GLASS J D
CS CITY UNIV NEW YORK, MT SINAI MED SCH, DEPT PHYSI & BIOPHYS, 100TH ST 5TH AVE, NEW YORK, NY, 10029; BROOKHAVEN NATL LAB, MED RES CTR, UPTON, NY, 1197; CITY UNIV NEW YORK, MT SINAI GRAD SCH, DEPT PHYS L & BIOPHYS, NEW YORK, NY, 00000
CYA USA
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (**1975**) Vol. 72, No. 6, pp. 2193-2196.
DT Article; Journal
LA ENGLISH
REC Reference Count: 24

L10 ANSWER 37 OF 50 PROMT COPYRIGHT 2003 Gale Group on STN

AN 82:49860 PROMT
TI Horseradish peroxidase, an **enzyme**, can **remove** 40+ phenols and aromatic **amines** from industrial wastewater samples, according to A Klibanov, an MIT biochemist.
SO Science News, (**3 Apr 1982**) pp. 232.
LA English
AB Hydrogen peroxide, using peroxidase as a catalyst, oxidizes phenols and aromatic amines and changes water soluble organics to insoluble ones in the process. Solid precipitates then can be easily filtered out. Removal efficiencies for most of the pollutants tested were nearly 100%.

L10 ANSWER 44 OF 50 DISSABS COPYRIGHT (C) 2003 ProQuest Information and Learning Company; All Rights Reserved on STN
AN 75:8930 DISSABS Order Number: AAR7521524
TI A NOVEL USE OF ENZYMES AS REAGENTS IN PEPTIDE SYNTHESIS: **ENZYMATIC REMOVAL** OF **AMINE** PROTECTING GROUPS.
AU MEYERS, CHESTER ALLEN [PH.D.]
CS CITY UNIVERSITY OF NEW YORK (0046)
SO Dissertation Abstracts International, (**1975**) Vol. 36, No. 4B, p. 1690. Order No.: AAR7521524. 119 pages.
DT Dissertation
FS DAI
LA English
ED Entered STN: 19921118
Last Updated on STN: 19921118

L10 ANSWER 45 OF 50 NIOSHTIC on STN
AN 1997:107645 NIOSHTIC
DN NIOSH-00150913
TI Chelation In Metal Intoxication. XV: Influence Of Dimercaptopropane Sulphonate (DMPS) On Lead Poisoned Rats With Normal Or Damaged Kidneys
AU Flora, S. S.; Tandon, S. K.
SO Industrial Health, Vol. 23, No. 1, pages 17-24, 20 references
CODEN: INHEAO

PD Jan 1985
DT Journal
LA ENGLISH
AB The effect of 2,3-dimercaptopropane-1-sulphonate (4076-02-2) (DMPS) on lead (7439-92-1) poisoning was investigated in rats. Male albino-rats were orally administered 10 milligrams per kilogram (mg/kg) lead as lead-acetate for 4 weeks. Animals were given single injections of 3mg/kg uranyl-acetate to induce renal damage or an equivalent amount of sodium-acetate. Twenty four hour urine samples were collected for 3 days. All controls and some experimental animals were killed on day 4. Kidneys, liver, and brain were removed and blood was collected. The remaining rats were administered 63mg/kg DMPS in two doses 8 hours apart or were given saline. Urine was collected for 4 days at 24 hour intervals. Animals were killed and tissues and blood were **removed**. Renal and blood **enzymes** and brain biogenic **amines** were determined. Lead was determined in blood, tissues, and urine. Lead exposure for 4 weeks significantly increased blood, kidney, liver, and brain concentrations of lead, blood zinc-protoporphyrin (ZPP) and urinary delta-aminolevulinic-acid, inhibited the activities of blood delta-aminolevulinic-acid-dehydratase (delta ALAD), renal lactic-dehydrogenase (LDH), glutamic-oxalacetic-transaminase (GOT), and alkaline-phosphatase (ALP), and decreased blood hemoglobin. Lead altered the concentrations of biogenic amines. Uranyl-acetate enhanced urinary LDH, GOT, and ALP excretion, further increased the concentration of lead, and inhibited enzyme activities in the kidney. Uranyl-acetate enhanced the lead induced inhibition of blood delta ALAD and elevation of blood ZPP. DMPS enhanced lead urinary excretion and reduced urinary delta ALAD. DMPS lowered blood, renal, and hepatic lead concentrations, and restored lead induced inhibition of blood delta ALAD activity and blood ZPP elevation. All DMPS effects were more marked in animals with normal kidneys. DMPS did not restore lead induced alterations in brain lead, biogenic amines, or renal enzyme activities. The authors conclude that DMPS is an effective chelating agent for the treatment of lead intoxication.

L10 ANSWER 46 OF 50 CROPU COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2000-88763 CROPU D G
TI Toxicity to the snail Lymnaea acuminata of plant-derived molluscicides in combination with synergists.
AU Singh K; Singh D K
CS Univ.Gorakhpur
LO Gorakhpur, India
SO Pest Manage.Sci. (56, No. 10, 889-98, 2000)
DT Journal
LA English
FA AB; LA; CT
AN 2000-88763 CROPU D G
AB Effects of neem oil, garlic powder and ginger rhizome oleoresin and their active components (azadirachtin, allicin and (6)-gingerol, respectively) on Limnaea acuminata enzyme activity and biogenic amine and protein levels were determined, alone or in combination with piperonyl butoxide (PBO) or ENT-8184 (MGK-264). All molluscicide or molluscicide + synergist treatments significantly reduced activities of acetylcholinesterase (AChE; EC)-3.1.1.7), lactic dehydrogenase (EC-1.1.1.27), acid and alkaline phosphatases (EC-3.1.3.2, EC-3.1.3.1) and Na+K+ ATPase (EC-3.6.1.3), and significantly increased succinic dehydrogenase (EC-1.3.99.1) activity. In-vivo, 24 hrs exposure to sublethal levels of azadirachtin, allicin or (6)-gingerol, alone or + synergists, significantly affected dopamine and 5-hydroxytryptamine levels in nervous tissue.
ABEX Adult snails were exposed to 40 or 80% of the 24-hr LC50 of neem oil or garlic powder, or to 40 or 80% of the 48-hr LC50 of ginger oleoresin, all with or without PBO or ENT-8184 (in a 1:5 ratio). The molluscicide active components were used at similar dosage levels. The snails were washed after 24 hrs treatment, and nervous tissue was **removed** for measurement of **enzyme** activities and biogenic

amines and protein.

L10 ANSWER 47 OF 50 DRUGB COPYRIGHT 2003 THOMSON DERWENT on STN
AN 1975-29959 DRUGB C B
TI ENZYMES AS REAGENTS IN PEPTIDE SYNTHESIS. **ENZYMATIC REMOVAL** OF **AMINE** PROTECTING GROUPS.
AU MEYERS C; GLASS J D
LO NEW YORK AND UPTON,N.Y.,USA.
SO PROC.NATL.ACAD.SCI. (72, NO.6, 2193-96, **1975**)
DT Journal

L10 ANSWER 48 OF 50 DRUGB COPYRIGHT 2003 THOMSON DERWENT on STN
AN 1976-05837 DRUGB C B
TI A NOVEL USE OF ENZYMES AS REAGENTS IN PEPTIDE SYNTHESIS. **ENZYMATIC REMOVAL** OF **AMINE** PROTECTING GROUPS.
AU MEYERS C A
LO NEW YORK,N.Y.,USA.
SO DISSERTATION ABSTR.INTERN.B (36, NO.4, 1690, **1975**)
DT Journal

L10 ANSWER 49 OF 50 FROSTI COPYRIGHT 2003 LFRA on STN
AN 524986 FROSTI
TI Use of a deaminating oxidase in baking.
IN Wagner P.; Sl J.Q.
PA Novo Nordisk A/S
SO United States Patent
PI US 6039982 B **20000321**
WO 9721351 19970619
AI 19980423
PRAI Denmark 19951208; 19951211
NTE **20000321**
DT Patent
LA English
SL English
AB A dough or bread improver is disclosed, which includes a deaminating oxidase, such as an **amine** oxidase or an L-amino acid oxidase. Such **enzymes** catalyse oxidative **removal** of **amine** groups from an **amine**-containing substrate with concomitant formation of hydrogen peroxide. The composition improves the strength, handling properties and machinability of the dough, increases the volume of the baked product, and improves crumb structure and softness.

L10 ANSWER 50 OF 50 FROSTI COPYRIGHT 2003 LFRA on STN
AN 479454 FROSTI
TI Use of a deaminating oxidase in baking.
IN Wagner P.; Sl J.Q.
PA Novo Nordisk A/S
SO European Patent Application
PI EP 865241 A1
WO 9721351 19970619
AI 19961202
PRAI Denmark 19951208; 19951211
DT Patent
LA English
SL English
AB A dough or bread improver is disclosed, which includes a deaminating oxidase, such as an **amine** oxidase or an L-amino acid oxidase. Such **enzymes** catalyse oxidative **removal** of **amine** groups from an **amine**-containing substrate with concomitant formation of hydrogen peroxide. The composition improves the strength, handling properties and machinability of the dough, increases the volume of the baked product, and improves crumb structure and softness.

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	254.74	281.94

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-12.37	-12.37

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